



Pennsylvania Commercial Hybrid Corn Tests Report

College of Agricultural Sciences
Cooperative Extension



CORN TALK NEWS

PENNSYLVANIA MASTER CORN GROWERS ASSOC., INC.

Short-season hybrids (Maturity Zone 1) 1994 results

Tests of commercially available corn hybrids are conducted annually at several locations in each of the four maturity zones in Pennsylvania to provide farmers, seed producers, county extension agents, and other interested persons with information about hybrid performance. This report includes both the grain and silage results from the 1994 season.

Tables 1 and 2 contain the combined results for all locations in this zone, except as noted. Those in Table 1 are for the advanced hybrids tested previously for at least one year, and those in Table 2 are for new hybrid entries. New entries are tested for at least one year before being included in the advanced tests. A two-year summary of results for hybrids tested in both 1993 and 1994 growing seasons is given in Table 3. The results for hybrids entered in the silage performance test are given in Table 4.

Procedures

This testing program was available to any producer of hybrid seed corn. For the grain tests, hybrids were planted in paired-row plots of 1/500 of an acre. Each row was overplanted—34 kernels per row, and thinned to a standard count of 48 plants per plot when the corn was 12-18 inches tall. The final population was 24,000 plants per acre. Silage plots were 1/1,000 acre in size, consisting of one row overplanted to 38 kernels and thinned to a final population of 28,000 plants per acre. All entries were replicated three times in each test.

Test plots were planted with modified mechanical planters. Grain-test plots were harvested with a self-propelled combine equipped with electronic instrumentation for determining weight and moisture. Silage plots were harvested with a forage harvester. Grain yields are reported as bushels per acre while

grain moisture and erect plants are reported as percentages. Shelled grain yields were standardized at 15.5 percent grain moisture. Percentage of checks for each hybrid was based on the mean of five check hybrids and calculated for moisture, yield, and erect plants. Data such as plant height, ear height, and leaf disease ratings were taken in the field. Disease ratings were based on a scale of 0.5 to 5.0, progressing from little or no disease to premature death. Silage results are given as actual field yield in tons per acre, calculated on the basis of 65 percent moisture, tons of dry matter per acre, and percentage of water in the plants.

Growing conditions

Soil moisture was high and temperature low during much of May at locations in this zone. Planting was begun May 20 and completed May 31. Heat units tended to be normal or above during the summer months, but cooler than normal during September and October. As in the other zones, October was a dry month. Some locations had high soil moisture throughout the summer. The Bradford location was exceptionally wet causing extremely variable plant development throughout the field. The silage test was on a better drained portion of the field; the grain test did poorly because of the wet conditions and was abandoned. The Clearfield location suffered some from a heavy infestation of fall panicum and foxtail. Grain moisture at harvest at most locations was high, as were grain yields. Grain harvesting was begun October 26 and completed November 8.

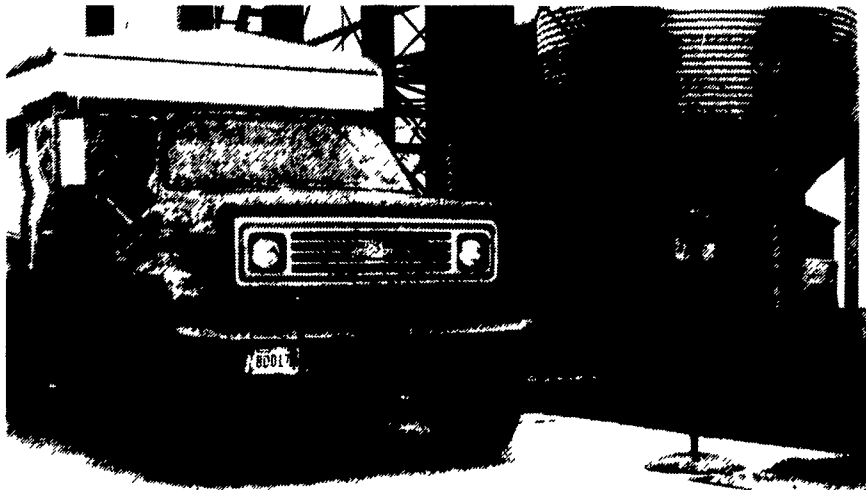
Diseases, insects and other pests

Leaf and stalk diseases were not a major problem at the locations in this zone. One set of hybrids grown in Centre County was

(Turn to Page 20)

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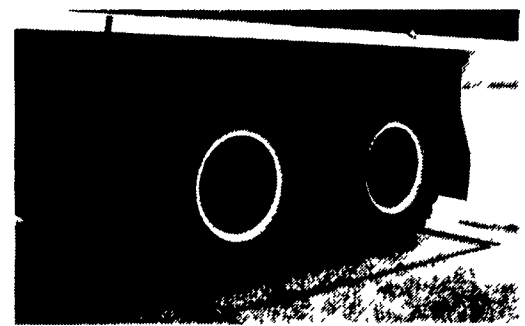
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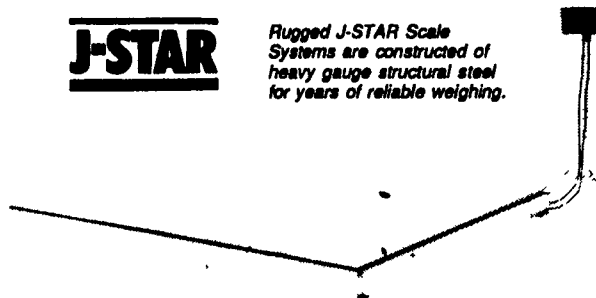
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